

Project Report

Slope Stabilisation

CLIENT	CONTRACTOR
Places for People Developments Ltd	DR Groundworks
INSTALLER	DESIGNER
Site 7	Card Geotechnics

Requirement

At Trumpet Junction in Basingstoke, an existing embankment required stabilisation to reduce the load acting on a concrete retaining wall located at the toe of the slope. The wall formed part of an under-road subway structure, making long-term stability critical to both structural integrity and public safety.

The embankment sat within a constrained environment, with residential housing at the crest and a footpath at the base, increasing the importance of a reliable and minimally disruptive solution. Additionally, the presence of underground services, including a water pipe, influenced the anchor layout and installation depths.

Card Geotechnics specified a solution incorporating 95 x AS-20 Vulcan Earth Anchors, designed to reinforce the slope and relieve pressure on the retaining wall while working within the site's constraints.

Testing

Due to the nature of the project and design confidence in the specified system, no on-site proof or load testing was carried out.

However, installation methodology and anchor configuration were carefully controlled to ensure performance requirements were met. Anchors were installed at a 30° angle to optimise load transfer and slope stabilisation, with varying embedment depths to accommodate site constraints, including shallower installations in areas where underground services were present.

Ground conditions presented additional challenges, with recent rainfall resulting in muddy and unstable working conditions. These factors were managed through careful planning and appropriate installation techniques.

Solution

Anchor Systems' Vulcan Earth Anchors provided an effective and efficient slope stabilisation solution, tailored to the specific challenges of the site. A total of 95 x AS-20 anchors were installed across multiple rows, with depths of 2m and 3m depending on location and underground constraints. The anchors were installed into the embankment using an 8-tonne excavator fitted with a hydraulic breaker, followed by load locking using a 12-tonne hydraulic ram to ensure correct tensioning.

Due to restricted access and the steep nature of the slope, rope access techniques were required. A helical screw pile was installed at the crest of the slope and pull-tested to provide a secure anchorage point for safe working during installation.

The system was installed at a 30° angle and finished with Grade A topsoil, allowing the embankment to be reinstated and blended back into its surroundings. Installation was completed efficiently within one week, minimising disruption while delivering a robust ground anchoring solution that reduced the load on the retaining wall and improved overall slope stability.



Trumpet Junction



SCAN THE QR CODE TO WATCH THE VIDEO

